



TRANSMITTAL LETTER  
(General - Patent Pending)

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Docket No.  
113197-023

04DC  
#3

In Application Of: Sakuma, K., et al.

BEST AVAILABLE COPY

Serial No.  
10/060,797

Filing Date  
January 29, 2002

Examiner  
Unknown

Group Art Unit  
Unknown

Title: MANUFACTURING METHOD FOR OPTICAL COUPLER/SPLITTER AND METHOD FOR ADJUSTING  
OPTICAL CHARACTERISTICS OF PLANAR LIGHTWAVE CIRCUIT DEVICE

TO THE ASSISTANT COMMISSIONER FOR PATENTS:

Transmitted herewith is:

Transmittal of Information Disclosure Statment (duplicate); Supplement Information Disclosure Statement (1 pg.);  
One English Abstract; return receipt postcard.

in the above identified application.

- ☒ No additional fee is required.
- ☐ A check in the amount of \_\_\_\_\_ is attached.
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Dated:

Michael S. Leonard (Reg. No. 37,557)  
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20231.

  
Signature of Person Mailing Correspondence

Robert J. Buccieri

Typed or Printed Name of Person Mailing Correspondence

CC:

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**

(Under 37 CFR 1.97(b) &amp; 1.97(c))

Docket No.

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Address to:

Assistant Commissioner for Patents

Washington, D.C. 20231

**37 CFR 1.97(b)**

1. ☒ The Information Disclosure Statement submitted herewith is being filed within three months of the filing of a national application other than a continued prosecution application under 37 CFR 1.53(d); within three months of the date of entry of the national stage as set forth in 37 CFR 1.491 in an international application; before the mailing of a first Office Action on the merits, or before the mailing of a first Office Action after the filing of a request for continued examination under 37 CFR 1.114.

**37 CFR 1.97(c)**

2. ☒ The Information Disclosure Statement submitted herewith is being filed after the period specified in 37 CFR 1.97(b); provided that the Information Disclosure Statement is filed before the mailing date of a Final Action under 37 CFR 1.113, a Notice of Allowance under 37 CFR 1.311, or an Action that otherwise closes prosecution in the application, and is accompanied by one of:

☐ the statement specified in 37 CFR 1.97(e);

**OR**

☐ the fee set forth in 37 CFR 1.17(p).

**TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT**  
(Under 37 CFR 1.97(b) or 1.97(c))

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Unknown

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**MANUFACTURING METHOD FOR OPTICAL COUPLER/SPLITTER AND METHOD FOR  
OPTICAL CHARACTERISTICS OF PLANAR LIGHTWAVE CIRCUIT DEVICE**

**Payment of Fee**

(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

- ☐ A check in the amount of \_\_\_\_\_ is attached.
- ☒ The Assistant Commissioner is hereby authorized to charge and credit Deposit Account No. 02-1818 as described below. A duplicate copy of this sheet is enclosed.
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Signature of Person Mailing Correspondence

Robert J. Buccieri

Typed or Printed Name of Person Mailing Certificate

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Signature

Dated: 02/19/2002

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CC:



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Sakuma, K., et al.

Appl. No.: 10/060,797

Filed: January 29, 2002

Title: MANUFACTURING METHOD FOR OPTICAL COUPLER/SPLITTER AND  
METHOD FOR ADJUSTING OPTICAL CHARACTERISTICS OF PLANAR  
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Art Unit: Unknown

Examiner: Unknown

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Assistant Commissioner for Patents  
Washington, DC 20231

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Sir:

Applicants submitted an Information Disclosure Statement ("IDS") with the filing of this Application on January 29, 2002. The IDS included an article by Kondo, et al., "Glass machining by femtosecond laser pulses," Jpn. Journal Applied Physics, Vol. 69, No. 4, 2000, pp. 411-414. The Kondo article is in the Japanese language. Enclosed is an English language abstract for the Kondo article.

The January 29 IDS included a PTO-1449 form listing the Kondo article. Accordingly, another 1449 form is not enclosed.

In accordance with the provisions of 37 C.F.R. 1.56, 37 C.F.R. 1.97, and 37 C.F.R. 1.98, Applicants request that a citation and consideration of the references cited in the January 29 IDS be made during the course of examination of the above-identified application for United States patent.

Applicants look forward to early and favorable consideration of this matter.

Respectfully submitted,

BELL, BOYD & LLOYD LLC

BY

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## GLASS MACHINING USING FEMTOSECOND LASER PULSE

Various glass machining operations can be performed by using a femtosecond laser pulse which has a short pulse width and strong peak power. For example, when the laser pulse is focused in an inner part of glass by adjusting the power density of the laser, changes in the refractive index and photoreduction of ions, and selective crystallization are induced in the glass, and as a result, glass machining such as forming of an optical waveguide or three-dimensional microdrilling can be performed. Furthermore, ablation without a heating process is induced by radiating the laser pulse on the surface of the glass.